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Students' Subjective Appraisals of Driving Behavior

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ABSTRACT. Students' self-enhancing beliefs about their own driving behaviors were examined as functions of the desirability, controllability, and verifiability of particular actions. The participants were 48 Dutch university students. They completed a computer-administered questionnaire in which desirability, controllability, and verifiability of particular actions were systematically manipulated. They rated the likelihood of a particular action both for themselves and for the average Dutch driver. The results partially supported the hypotheses that the participants would (a) rate undesirable actions as more probable under conditions of low verifiability and low controllability and (b) consider other people more likely than they to engage in undesirable actions. One unexpected finding was that the participants deemed undesirable actions more probable when controllability was high rather than low.

ACCORDING TO RESEARCH, people are inclined to process information in ways that protect or enhance their self-esteem (Van Lange, Taris, & Vonk, 1997). They promote self-enhancing interpretations of success and failure by internal attributions for their successes and external attributions for their failures (Ross & Fletcher, 1985; Zuckerman, 1979). For example, people may give others less credit for their successes but more blame for their failures (Green & Gross, 1979; Taylor & Koivumaki, 1976). Similarly, they may consider themselves distinctly superior (more generous, honest, smart, and intelligent; less deceitful, selfish, foolish, and ignorant) to other people (Alicke, 1985; Allison, Messick, & Goethals, 1989; Van Lange, 1991; Van Lange et al., 1997). Such self-enhancing perceptions have been described as *illusions* because it is impossible for all or most people to be better than average (Goethals, Messick, & Allison, 1991).

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In the present study, I applied the aforementioned notions to driving behavior. Many young people consider themselves at least reasonably good drivers (Taris, 1997); however, according to Dutch census figures, drivers aged 18–24 years old are not only responsible for 25% of the fatal accidents in The Netherlands but are also overrepresented in nonfatal accidents (CBS, 1994). Similar figures apply to other countries (Arthur & Graziano, 1996); the skills of the average young driver are apparently inadequate. Therefore, because the statistics are at odds with young drivers' self-enhancing beliefs, it is relevant to examine whether they also hold illusions of superiority about their driving ability. Researchers have examined illusory superiority mainly with respect to abstract qualities such as intelligence, honesty, and generosity. Because manifestations of a lack of driving skills (e.g., frequent involvement in potentially dangerous situations) are observable, they offer more opportunities for direct social comparison and empirical falsifications than do abstract qualities (e.g., honesty and intelligence).

Therefore, I examined the self-enhancing beliefs of young drivers by manipulating two variables that affect the development of self-enhancing beliefs: controllability (the driver's ability to control) and verifiability (observability by others) of a particular action.

Desirable and Undesirable Actions of Self and Others

Generally, drivers can choose from a variety of actions—desirable (e.g., stopping for a red light) or undesirable (e.g., speeding). In the present study, I used traffic regulations to distinguish between desirable and undesirable actions. I based my first hypothesis on the assumption that many—if not all—the participants were aware that the purpose of traffic regulations is to ensure the smooth and safe progress of traffic.

Hypothesis 1: In general, people believe that desirable (conforming to the regulations) actions are more likely than undesirable (violating the regulations) actions.

Because of the tendency toward feelings of superiority noted earlier, people consider others more likely than they to participate in undesirable actions (Alicke, 1985; Allison et al., 1989).

Hypothesis 2: People consider themselves less likely than others to engage in undesirable, but not in desirable, actions.

Verifiability

Two variables affect the choice between a desirable and an undesirable action: the verifiability and the controllability of the particular action. According to implicit assumptions about verifiability, public situations may facilitate desirable actions, whereas private situations may give rise to undesirable actions (Jorgenson & Pap-

ciak, 1981). Public situations also offer more opportunities for social benefits (approval) or costs (disapproval), whereas anonymous situations afford fewer, or no, such opportunities (Allison, McQueen, & Schaerfl, 1992; Tetlock, 1992).

Hypothesis 3a: People view undesirable actions, but not desirable actions, as more likely under conditions of low verifiability (private) rather than high verifiability (public).

I was also interested in whether illusions of superiority are more pronounced under conditions of low verifiability than under conditions of high verifiability. If so, people think that others, but not they themselves, will be tempted to engage in undesirable actions if such actions are difficult to verify.

Hypothesis 3b: The superiority effects (Hypothesis 2) are more pronounced for actions perceived as low-verifiable than for actions perceived as high-verifiable.

Controllability

It is reasonable to assume that undesirable actions occur when persons perceive that such actions can be attributed to external circumstances (Alicke, 1985; Taris, 1997). Internal attribution of undesirable actions is not conducive to self-enhancement; for desirable actions, internal attribution is unnecessary for self-enhancement; thus, there should be a Desirability \times Controllability interaction effect.

Hypothesis 4a: Undesirable actions are more likely if the causes for the actions can be attributed externally.

Again, I was interested in whether people believe that others, but not they themselves, are tempted to engage in undesirable actions if the causes for these actions can be attributed externally rather than internally.

Hypothesis 4b: The superiority effects (Hypothesis 2) are more pronounced for undesirable actions attributable to external causes than for those attributable to internal causes.

Method

Participants

The participants were 48 university students (46% male; mean age = 23.4 years, $SD = 2.8$) who volunteered for the study. They received the equivalent of \$1 (U.S.) for their participation. The participants held valid driving licenses; on average, they had 4.0 years ($SD = 2.9$) of driving experience. They considered themselves reasonably good drivers. Of the total sample, 59% indicated that they ranked in the top 40% of drivers, whereas only 1 participant admitted belonging in the bottom 20%. Of the participants, 18% had been involved in at least one car accident over the last 3 years, and another 18% had received at least one summons during that period.

Experimental Design

The study involved five within-subject variables: desirability of action (desirable/undesirable), target of judgment (self/others), controllability of action (external/internal attribution), verifiability of action (high/low), and scenario ("speeding": obey or exceed speed limit; "traffic light": stop for or run a red light). The primary dependent variable involved probability judgments about the likelihood that the participants themselves, or the average Dutch driver facing a comparable situation, would engage in a particular action.

Procedure

All the participants completed a computer-administered questionnaire. They received descriptions of four situations in which controllability and verifiability were manipulated. For each situation, the two aforementioned scenarios were presented. In each scenario, a desirable and an undesirable action were given. By randomizing the order of presentation of the situations, scenarios, and actions within subjects, I eliminated the need to control order of presentation. The situations described were as follows:

Low controllability/high verifiability: You are driving home after work. The traffic is rather dense. You are aware that the police often patrol in this area. The meeting at your job took more time than you expected. Now you will be late for the home match of your volley-ball team, in which you are drafted. Your team counts on you.

High controllability/high verifiability: You are driving home after work. The traffic is rather dense. You are aware that the police often patrol in this area. You left your job at the usual time. Tonight you will play a home match with your volley-ball team, in which you are drafted. Your team counts on you.

In both the low controllability/low verifiability and the high controllability/low verifiability versions, I changed the third sentence to "You are aware that the police seldom patrol in this area."

In each of the four permutations of the situation, I presented the two scenarios (speeding and traffic light). In the speeding scenario, the undesirable action was as follows: "You drive on. At times you exceed the speed limits"; the desirable action was "You drive on. Nowhere do you exceed the speed limits." In the traffic-light scenario, the desirable action was "Ahead of you a traffic light turns red. You decide to stop"; the undesirable action read "Ahead of you a traffic light turns red. You decide to drive on."

Ratings

The desirable and undesirable actions were rated for (a) desirability—1 = *very undesirable*, 9 = *very desirable*; (b) verifiability (likelihood that action will

be spotted by a police agent)—1 = *very unlikely*, 9 = *very likely*; (c) controllability (degree to which circumstances caused the action)—1 = *circumstances were the only reason*, 9 = *circumstances did not play any role at all*. Furthermore, the participants judged the likelihood that they (and others) would engage in desirable and undesirable actions: “How likely do you think you are (the average Dutch driver is) to choose this decision when faced with a comparable situation?” The participants rated the likelihood on 9-point scales ranging from 1 (*very unlikely*) to 9 (*very likely*); the order in which the participants rated themselves and others was randomized within subjects.

Results

Manipulation Checks

I analyzed ratings of desirability in a four-way ($2 \times 2 \times 2 \times 2$) analysis of variance (ANOVA) with desirability, verifiability, scenario, and controllability as within-subject variables. The participants perceived desirable actions as more desirable ($M = 7.7$, $SD = .9$) than undesirable actions ($M = 2.6$, $SD = 1.4$), as evidenced by a strong main effect of desirability, $F(1, 47) = 293.3$, $p < .001$. Also observed was a strong interaction of desirability and scenario, $F(1, 47) = 26.9$, $p < .001$, indicating that the influence of desirability was more pronounced for Scenario 1 (speeding; M s = 7.4 and 3.0, a mean difference of 4.4) than for Scenario 2 (traffic light; M s = 8.0 and 2.1, a mean difference of 5.9).

I analyzed the ratings of verifiability in a similar four-way ANOVA. The analysis revealed a main effect only for verifiability, $F(1, 47) = 4.8$, $p < .05$. The participants considered actions in the low-verifiable condition less verifiable ($M = 3.2$, $SD = 1.6$) than actions in the high-verifiable condition ($M = 3.4$, $SD = 1.5$), although these figures indicate that the manipulation of verifiability was not strong.

Last, I analyzed the ratings of controllability in an identical ANOVA; the participants perceived actions in the high-control condition as more controllable ($M = 4.8$, $SD = 1.6$) than actions in the low-control condition ($M = 3.8$, $SD = .9$), $F(1, 47) = 32.1$, $p < .001$. No further effects were significant.

Probability Judgments for Self and Others

Hypothesis 1. I analyzed the participants' judgments about the probability that they and others would engage in particular actions via a five-way ANOVA, with desirability, verifiability, controllability, scenario, and target (self/others) as within-subject factors. A main effect of target revealed a higher perceived likelihood of actions for others ($M = 5.9$, $SD = .7$) than for self ($M = 5.5$, $SD = .8$), $F(1, 47) = 7.7$, $p < .01$. Consistent with Hypothesis 1, I found a main effect of desirability, $F(1, 47) = 170.4$, $p < .001$. The participants rated desirable actions as more probable ($M = 7.3$, $SD = .89$) than undesirable actions ($M = 4.1$, $SD = 1.2$).

Hypothesis 2. There was a Target \times Desirability interaction, $F(1, 47) = 37.0, p < .001$. For self, I found a large difference between the probability of desirable ($M = 7.6, SD = 1.0$) and undesirable ($M = 3.4, SD = 1.6$) behavior, $F(1, 47) = 176.7, p < .001$. For others, this difference was considerably smaller, although still significant ($M_s = 7.0$ and $4.7, SD_s = 1.0$ and 1.3 , respectively); $F(1, 47) = 69.7, p < .001$. Thus, Hypothesis 2 was supported.

Hypothesis 3. I found the expected interaction of Desirability \times Verifiability, $F(1, 47) = 22.1, p < .001$. There was a small effect of verifiability for the desirable actions, $M_s = 7.2$ ($SD = 1.1$) for low verifiability and 7.5 ($SD = .9$) for high verifiability, $F(1, 47) = 6.7, p < .05$. Thus, desirable actions were rated as slightly more probable in the highly verifiable condition. The effect of verifiability, however, was considerably larger for the undesirable actions, $F(1, 47) = 12.9, p < .001$. The participants judged undesirable actions as more likely in the high-verifiability condition ($M = 3.8, SD = 1.3$) than in the low-verifiability condition ($M = 4.4, SD = 1.3$). The results did not support Hypothesis 3b, $F(1, 47) < 1.0, ns$: The participants did not believe that only other people would be tempted to engage in undesirable actions when the verifiability of that action was low.

Hypothesis 4. There was a significant Controllability \times Desirability interaction, $F(1, 47) = 8.0, p < .01$. For the desirable actions, there was no effect of controllability: $M = 7.3$ ($SD = .9$) for the low-controllability condition; $M = 7.3$ ($SD = 1.0$) for the high-controllability condition, $F(1, 47) < 1, ns$. The likelihood of an undesirable action was highest in the highly controllable condition, $M = 4.3$ ($SD = 1.3$) versus $M = 3.9$ ($SD = 1.3$) in the low controllability condition, $F(1, 47) = 10.2, p < .01$. Thus, contrary to Hypothesis 4a, the participants believed that undesirable actions were most likely in the high-controllability condition. Last, Hypothesis 4b was not supported: The Controllability \times Desirability interaction was not further qualified by target, $F(1, 47) = 1.7, ns$. The participants did not believe that others would be more tempted to engage in an undesirable action when the controllability of that action was low.

The only other significant effects involved type of scenario. The analysis revealed a significant main effect for type of scenario, $F(1, 47) = 20.8, p < .001$; the participants perceived actions as more likely in the speeding scenario ($M = 6.4, SD = 1.1$) than in the traffic-light scenario ($M = 5.4, SD = .5$). This main effect was further qualified by desirability, $F(1, 47) = 54.6, p < .001$. In the speeding scenario, the difference between the likelihood of desirable ($M = 6.9, SD = 1.3$) and undesirable ($M = 5.9, SD = 1.7$) actions, $F(1, 47) = 12.9, p < .001$, was on average much smaller than in the traffic-light scenario ($M_s = 7.7$ and $3.2, SD_s = 1.0$ and 1.3 , respectively), $F(1, 47) = 202.5, p < .001$. That finding suggests that my manipulation of desirability was strongest in the traffic-light scenario.

Discussion

In the present study, I examined perceptions of self and others among young drivers as functions of desirability, controllability, and verifiability of particular actions. The results supported Hypothesis 1, that desirable actions would be more probable than undesirable actions. The participants believed that others would be more tempted than they would to engage in undesirable actions; the young drivers held self-enhancing beliefs about their driving behavior. Hypothesis 2 was also supported.

According to Hypothesis 3, undesirable actions would be especially probable when the verifiability (Hypothesis 3a) or the controllability (Hypothesis 3b) of the action was low. The results supported Hypothesis 3a: The participants deemed undesirable actions more likely when the verifiability of the actions was low rather than high. For the desirable actions, this effect was considerably smaller. This finding matches the "folk theory" that more police in the streets will reduce the frequency of road offenses. Contrary to expectations (Hypothesis 4a), that effect was not further qualified by target of judgment: The participants did not believe that only other people would engage in undesirable actions when the verifiability of the actions was low.

The results did not confirm the expectation that the participants would judge undesirable actions more probable when the controllability of those actions was low (Hypothesis 3b). Although a significant Desirability \times Controllability interaction emerged, the participants deemed undesirable actions more probable when the actions occurred under highly controllable circumstances. That finding suggests that they generally considered that undesirable actions were caused primarily by internal attributes, whereas external circumstances were neither necessary nor sufficient to engender undesirable actions. People are primarily responsible for their own actions; they cannot invoke circumstances as an excuse for undesirable actions. The results did not support my expectation (Hypothesis 4b) that the participants would apply such reasoning to others, but not to themselves (cf. Green & Gross, 1979).

Taken together, the results of the present study moderately support my key assumption: Young drivers are subject to illusions of superiority about their driving skills. Although the participants considered others more likely than they were to engage in undesirable actions, this belief was not strong enough to be reflected in the higher-order interactions with controllability and verifiability.

Some limitations of the present study should be acknowledged. First, I used a limited number of scenarios describing specific situations, thereby representing only a small sample of the more varied actions possible in everyday practice. Additionally, the two scenarios focused on unambiguously desirable or undesirable practices, whereas in reality, people may consider less extreme actions than those represented in this study. Despite the limitations, the results support the idea that young drivers process information in ways that facilitate a favorable

evaluation of the self. In the present study, moreover, that principle is not confined to abstract dimensions such as intelligence, honesty, and generosity; it also generalizes to observable behavior.

The finding that participants generally believed they were capable drivers—or at least better than average—has practical implications for programs designed to improve the driving behavior of young people. The results suggest that young drivers, when confronted with the high accident rates for their age group, believe that it is unlikely that they personally will be involved in—or cause—such accidents. The participants in the present study believed that other people were more likely than they to engage in undesirable actions; therefore, by extension, they may also believe that other drivers are more likely than they to threaten road safety. Accordingly, it may be difficult actually to change the behavior of young drivers unless researchers can find ways to make them aware of the illusory character of their feelings of superiority.

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